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1. (previously presented) A telecommunications system suitable for transmitting real-time data and non-real-time packet data, comprising

a first and a second communication station, and

a dual mode channel for communication of both the real-time and the non-real-time data from the first to the second station,

wherein

the first station comprises a first transceiver which is operable to transmit both the real-time and the non-real-time data,

the second station comprises a second transceiver which is operable to receive the real-time and/or the non-real-time data, and

the first station further comprises a controller for generating an output data stream comprising the real-time data, the controller also allocating non-real-time packet data to the output data stream when the data rate of the real-time data is less than the full data capacity of the dual mode channel, which output data stream is transmitted by the transceiver over the channel,

wherein for at least part of the output stream the real time and non-real time packet data each have a respective non-zero minimum bit rate and a combined bit rate less than a maximum value

wherein the part of the output stream is a single time slot.

2. (previously presented) A system as claimed in claim 1, wherein the real-time data comprises speech data.

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3. (canceled)

4. (previously presented) A system as claimed in claim 1, wherein the first transceiver comprises a buffer for storing the non-real-time packet data for transmission during reductions in the data rate of the real-time data.

5. (previously presented) A system as claimed in claim 1, where the first station comprises a base station, and the second station comprises a mobile station of a cellular telecommunications network.

6. (previously presented) a telecommunications station for use in a system as claimed in claim 1.

7. (previously presented) A method of operating a telecommunications system suitable for transmitting real-time data and non-real-time packet data, the system comprising a first and a second communication station and having a dual mode channel for communication of both the real-time and non-real-time data from the first to the second station, the first station comprising a first transceiver which is operable to transmit both the real-time and the non-real-time data, the second station comprising a second transceiver which is operable to receive the real-time and/or non-real-time data, wherein the method comprises:

controlling the allocation by the first transceiver of the non-real-time packet data to an output data stream comprising the real-time data when the data rate of the real-time data stream is less than the full data capacity of the dual mode channel, and

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controlling the first transceiver to transmit the output data stream over the channel,

wherein, for at least part of the output stream, the real time and non-real time packet data each have a respective non-zero minimum bit rate and a combined bit rate less than a maximum value

wherein the part of the output stream is a single time slot.

8. (cancelled)

9. (previously presented) A method as claimed in claim 7 wherein the first station comprises a buffer, characterised by storing the non-real-time packet data in the buffer for transmission during reductions in the data rate at the real-time data.

10. (previously presented) The system of claim 1, wherein the output data stream resides in a single channel and comprises real-time data and non-real-time packet data.

11. (previously presented) The method of claim 7, wherein the output data stream resides in a single channel and comprises real-time data and non-real-time packet data.

12. (previously presented) A method of transmitting data comprising:

- allocating at least first, second, and third types of data to a single output data stream, at least the first type of data being real-time data, and at least the third type of data being non-real time packet data, the third type of data being added when the data rate of the

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first and/or second type of data is less than an expected capacity of a transmission channel;

- transmitting the single output data stream on a single, multiple-mode channel.

13. (previously presented) The method of claim 12 wherein the first type of data is video and the second type of data is voice.

14. (previously presented) A CDMA transmission method comprising:

- combining data of at least two types into a single output data stream, the at least two types comprising variable rate real-time data and non-real-time data, the non-real-time data being added to the output data stream only when an expected capacity of a transmission channel is greater than the data rate of the real-time data;
- encoding the combined data using a single spreading code, so that the combined data occupies a single transmission channel; and
- transmitting the encoded data on a single transmission channel;
- wherein, for at least part of the output stream, the real time and non-real time packet data each have a respective non-zero minimum bit rate and a combined bit rate less than a maximum value; and
- wherein the part of the output stream is a single time slot.

15. (previously presented) A receiving method comprising:

- receiving a combined data stream from a transmission channel;
- demodulating the data stream;

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- reading the frame header to determine which frames contain packet data and which frames contain speech data;
- reconstituting the speech data and the packet data;
- providing the speech data to a speech decoder; and
- providing a speech output signal and a packet data output signal at distinct output devices;
- wherein the header indicates both the packet data and the speech data being in a single dual mode channel.

16. (previously presented) A TDMA transmission method comprising:

- accumulating non-real-time packet data;
- allocating real-time data to an output data stream;
- determining when the real-time data does not require the full capacity of a transmission channel;
- allocating the non-real-time packet data to the output stream, when the real-time data does not require the full capacity;
- allocating output data stream to a channel that occupies more than one slot in a transmission time frame.

17. (previously presented) A TDMA transmission method comprising:

- accumulating non-real-time packet data;

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- allocating real-time data and the non-real-time packet data in variable proportions to multiple time segments within a time frame when the real-time data does not require the full capacity of a transmission channel; and
- transmitting the time frame.

18-20. (cancelled)

21. (previously presented) The method of claim 16, wherein, when the real-time data does not require full capacity, both real-time and non-real-time data are allocated as a dual mode channel to the output stream.

22. (previously presented) The method of claim 15,

wherein the packet data and the speech data each have a respective non-zero minimum bit rate and a combined bit rate less than a maximum value; and

wherein the packet data and the speech data appear together in at least one single time slot.

23. (previously presented) A system as claimed in claim 2, wherein the first station comprises a speech coding system which prepares the speech data for transmission from a speech input, and wherein the controller receives timing information from the speech coding system indicating the timing of interruptions in the speech data stream.

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24. (previously presented) A method as claimed in claim 7 wherein the real-time data comprises speech data and the first station comprises a speech coding system which prepares the speech data for transmission from a speech input, characterised by determining from the speech coding system the timing of interruptions in the speech data stream.

25. (previously presented) The method of claim 16, wherein the non-real-time data and the real-time data appear together in at least one single time slot.

26. (previously presented) The method of claim 17, wherein the non-real-time data and the real-time data appear together in at least one single time slot.

27. (previously presented) A receiving method comprising:

- receiving a combined data stream from a transmission channel;
- demodulating the data stream;
- reading at least one frame header to determine which time slots contain real-time data and which time slots contain non-real-time data, at least one time slot containing both real-time and non-real-time data;
- reconstituting the real and non-real-time data;
- providing the real and non-real-time data to distinct output devices.

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28. (previously presented) A method comprising transmitting an output data stream including both real-time and non-real-time data in a single time slot of a single dual mode channel.

29. (previously presented) The method of claim 28, wherein a respective frame header in the output data stream indicates that both real-time and non-real-time data reside in the single time slot.

30. (previously presented) A method comprising receiving a data stream including both real-time and non-real-time data in a single time slot of a single dual mode channel.

31. (previously presented) The method of claim 30, wherein a respective frame header in the data stream indicates that both real-time and non-real-time data reside in the single time slot.

32. (new) The system of claim 1 wherein the system operates in accordance with a telecommunications standard that includes an understood interpretation of what constitutes a time slot and the term "time slot" is interpreted in accordance with the standard.

33. (new) The method of claim 7, wherein the system operates in accordance with a telecommunications standard that includes an understood interpretation of what constitutes of a time slot and the term "time slot" is interpreted in accordance with the standard.

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34. (new) The method of claim 22, wherein the receiving is in accordance with a telecommunications standard that includes an understood interpretation of what constitutes of a time slot and the term "time slot" is interpreted in accordance with the standard.

35. (new) The method of claim 28, wherein the transmitting is in accordance with a telecommunications standard that includes an understood interpretation of what constitutes of a time slot and the term "time slot" is interpreted in accordance with the standard.

36. (new) The method of claim 30, wherein the receiving is in accordance with a telecommunications standard that includes an understood interpretation of what constitutes of a time slot and the term "time slot" is interpreted in accordance with the standard.